



**Massachusetts Department of Environmental Protection**  
Bureau of Waste Prevention – Air Quality

## **BWP AQ 09**

### **Instructions and Supporting Materials**

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#### **Introduction**

MassDEP *Permit Applications*, as well as *Instructions & Support Materials*, are available for download from the MassDEP Web site at [mass.gov/dep](http://mass.gov/dep) in two file formats: Microsoft Word™ and Adobe Acrobat PDF™. Either format allows documents to be printed.

*Instructions & Support Materials* files in Microsoft Word™ format contain a series of documents that provide guidance on how to prepare a permit application. Although we recommend that you print out the entire package, you may choose to print specific documents by selecting the appropriate page numbers for printing.

*Permit Applications* in Microsoft Word™ format must be downloaded separately. Users with Microsoft Word™ 97 or later may complete these forms electronically.

Permitting packages in Adobe Acrobat PDF™ format combine *Permit Applications* and *Instructions & Support Materials* in a single document. Adobe Acrobat PDF™ files may only be viewed and printed without alteration. *Permit Applications* in this format may not be completed electronically.



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**1. What is the purpose of this approval?**

A **Restricted Emission Status (RES)** approval is an approval legally limiting the amount of potential emissions (see definition in Question 2 of these instructions) from your facility that may include restrictions on the raw materials used, process or control device operations, or production quantities. Your facility's potential emissions determine the air quality regulations with which you must comply and the annual compliance fee you must pay.

Regulation 310 CMR 7.02(9) provides for Restricted Emission Status approvals. The legal authority for this regulation is MGL Chapter 111, sections 142B and 142D.

For specific information on who must apply for a Restricted Emission Status approval refer to 310 CMR 7.02(9). The application material submitted to MassDEP and the approval letter become the approval.

**2. Who must apply?**

You must file a Restricted Emission Status Plan if you wish to:

- a. change a facility's classification pursuant to 310 CMR 4.00 for compliance fee purposes;
- b. limit potential emissions to remain below the applicable thresholds requiring filing of an Emission Control Plan (pursuant to 310 CMR 7.18 - VOC RACT or 310 CMR 7.19 - NO<sub>x</sub> RACT);
- c. limit potential emissions to remain below "major source" thresholds requiring filing of an Operating Permit (pursuant to 310 CMR 7.00 Appendix C);
- d. limit potential emissions for purposes of applicability of any other air quality regulation.

**Federal Potential Emissions** means the maximum capacity of a stationary source to emit a regulated pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit a regulated pollutant, including air pollution control equipment and restriction on hours of operation or in the type or amount of material combusted, stored, or processed, shall be treated as part of its design only if the limitation or the effect it would have on emissions is **federally enforceable**.

**To be federally enforceable:**

- a limitation on any facility's capacity to emit a pollutant shall include testing, monitoring, and record keeping procedures sufficient to demonstrate compliance with the limitations. Examples of permit or SIP limitations generally considered federally enforceable are limitations on the allowable capacity of the equipment, requirements for the installation, operation and maintenance of pollution control equipment, limits on hours of operation, and restrictions on amounts of materials combusted, stored, or produced.
- restrictions on operation, production, or emissions must be stated in terms of the shortest averaging time that can be used as a practical matter, e.g., pounds per hour, or gallons per hour, and they must be tied to other enforceable operating restrictions at the source. General limitations on potential to emit, such as yearly limits (e.g., in tons per year), by themselves, are not considered federally enforceable. The use of hourly, daily, weekly or monthly rolling limits are generally acceptable.

Any federally enforceable limitations or conditions must be enforceable as a practical matter, ensure continuous compliance with the restrictions, and include adequate testing, monitoring, and record keeping procedures sufficient to demonstrate compliance with the limitations or conditions of an applicable federally enforceable approval. Fugitive emissions, to the extent quantifiable, are included in determining the potential



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to emit of a stationary source. Secondary emissions do not count in determining the potential to emit of a stationary source.

Refer to the specific regulations for details on requirements and qualifications.

**3. What other requirements should be considered when applying for this approval?**

This form is not to be used in applying for approval to construct or modify any facility, nor may this form be used to contravene the requirements of any written approval issued by the Department.

Please note that even if you restrict potential VOC emissions to below "major source" status (i.e. 50 tons per year), if your VOC emissions include 10 or more tons per year of a single Hazardous Air Pollutant (HAP) or 25 or more tons per year of any combination of HAPs, your facility would still be "major" and thus would still be subject to Operating Permit as contained in 310 CMR 7.00 Appendix C. See list of HAPs attached to application form. In addition, a limit on the facility's potential to emit HAP to avoid applicability to a standard under 40 CFR part 63 (MACT) must be in place prior to the first substantive requirement of that subpart otherwise the facility continues to be subject to the federal requirements.

**4. What is the application fee for this approval?**

The application fee is \$1,900.

**5.**

**Where do I send my completed plan application?**

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Your completed application, along with any supplemental information that may be required, must be submitted **in duplicate** to the appropriate MassDEP Regional Office for review and, if merited, approval. Find your Regional Office: <http://www.mass.gov/eea/agencies/massdep/about/contacts/>

Upon approval, MassDEP will stamp the second copy of the plan application and return it to you so both you and the agency will have identical copies of the Plan Approval.

You must use Form BWP AQ 09 - Restricted Emission Status when filing.

**6. Where can I get a copy of the timelines?**

The timelines are available on the MassDEP Website:

<http://www.mass.gov/eea/agencies/massdep/service/approvals/timely-action-fees-and-payments.html>

**7. What is the annual compliance fee for this approval?**

The amount of the annual compliance assurance fee is depends on the facility's total potential emissions established by this RES approval. Please consult Table 4.03, (Air Quality section) of 310 CMR 4.03 for more information. If you fail to pay the annual compliance assurance fee, your approval could be suspended or revoked.



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**8. How long is this approval in effect?**

A RES approval is in effect for the useful life of the approved emission unit(s) even if there is a change in ownership, or until the facility-wide PTE approved by this action is no longer valid. At that time, a modification to the RES may be required by 310 CMR 7.02(10) Modification of a Restricted Emission Status (RES).

**9. How can I avoid the most common mistakes made in applying for this approval?**

- a. Answer all questions on the application form and indicate "N/A" (not applicable) where appropriate.
- b. Submit all supplementary information requested in the application.
- c. Submit two copies of the application to the regional office for review. Find your region:  
<http://www.mass.gov/eea/agencies/massdep/about/contacts/>
- d. Submit fee and one copy of the MassDEP Transmittal Form  
<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html> to:  
Department of Environmental Protection, P.O. Box 4062, Boston, MA 02211.

**10. What are the regulations that apply to this approval? Where can I get copies?**

These regulations include, but are not limited to:

- a. Air Pollution Control Regulations, 310 CMR 6.00 - 8.00.
- b. Timely Action and Fee Provisions, 310 CMR 4.00.
- c. Administrative Penalty Regulations, 310 CMR 5.00.

They may be purchased at:

**State House Bookstore**  
**Room 116**  
**Boston, MA 02133**  
**617-727-2834**

**State House West Bookstore**  
**21 Elm Street**  
**Springfield, MA 01103**  
**413-784-1376**



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### Operating Restrictions

**Section G:** Provide the restriction that will be used to define emissions. The form presumes a fuel or raw material restriction in Item #1, by individual unit, but you are not confined to this option. Alternatives can be described in Item #2. The following briefly describes the intent and requirements of a restriction.

Applicability of many of the Department's air pollution control (310 CMR 7.00: Air Pollution Control) regulations is based not on actual emissions, but rather on potential emissions. Simply stated, potential emissions are the amount of emissions that will never be exceeded (usually defined on a yearly basis). While the actual emissions may vary year to year depending upon many factors, these emissions will never exceed the potential.

**Without restrictions** imposed, potential emissions are the emissions that would result if the equipment operated at 100% of its rated capacity, 100% of the time (24 hours per day, 7 days per week, 52 weeks per year).

**With restrictions** imposed, potential emissions can be defined as something less than 100% rated capacity, 100% of the time.

Examples of restrictions are:

- Limit on the amount of fuel burned.
- Limit on the amount of raw material processed.
- Limit on the production rate (derating the equipment).
- Limit on the hours of operation.
- Equipment modifications to limit throughput.

The major considerations in choosing a restriction are:

**Facility Needs.** Do not propose a restriction which would be unreasonable for the facility. These restrictions are enforceable by law and the facility can be subject to enforcement actions including substantial penalties for exceeding a restriction.

**Time Frames.** Restrictions must be expressed as a short term rate (for example, per hour, day, or month) and as a yearly (12 month rolling calendar period) rate.

**Enforceability.** Any restriction proposed must be verifiable as a practical matter. A proposal to restrict emissions to 1 ton per month of NO<sub>x</sub>, for example, is unverifiable. However, a proposal to restrict usage of #2 fuel oil to 50,000 gallons per month is readily verifiable through records of fuel purchases at the facility. (See Section J).

For further information, refer to the definition of potential emissions and EPA's June 13, 1989, guidance entitled "Guidance on Limiting Potential to Emit in New Source Permitting"  
[http://www.epa.gov/ttnatw01/pte/june13\\_89.pdf](http://www.epa.gov/ttnatw01/pte/june13_89.pdf)

### Emissions

**Section H:** Provide the equipment emission rate and calculate total emissions based on this rate, and the restrictions specified in Section D. Attach any necessary calculations.

**Emission Rate** is the rate at which the equipment emits a pollutant. For combustion equipment, this rate is usually specified in terms of lbs per million BTU, lbs per gallon of fuel, lbs per pound of fuel, lbs per horsepower, etc. For other equipment the rate is usually in lbs per hour but can be based on other units. Emission rates are



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very dependent upon individual equipment, air pollution control equipment and fuels used. Each unit is a unique case, but emission rates can be determined from:

**Approvals or emission standards.** If the unit has been previously approved, in writing, by the MassDEP, or is subject to a standard, and an emission rate was established, this is the preferred source for emission rates.

**Testing.** Testing of the unit could yield an accurate emission rate.

**Manufacturers information.** Often manufacturers can provide data on emission rates for a particular unit.

**Standard factors.** Standard emission factors are available for a limited number of sources. These are listed below, but should only be used as a last resort. Refer to EPA document AP-42 "Compilation of Air Pollution Emission Factors" and other documents for details.

**Engineering estimates.** Estimates can sometimes be derived from other information with certain assumptions. For example,  $\text{SO}_x$  emission rates can be calculated assuming a maximum sulfur content in fuel and total conversion to  $\text{SO}_x$ . VOC emissions can be calculated assuming all VOC in a coating is emitted.

**Standard Factors** (For use only when no other information is available):

### Boilers and Ovens:

#### Sulfur Dioxide ( $\text{SO}_2$ );

- 2 pounds of  $\text{SO}_2$  emitted for every pound of sulfur contained in the fuel (Use the maximum legal sulfur content possible, lbs per BTU).

#### Nitrogen Oxides ( $\text{NO}_x$ );

- 67 lbs of  $\text{NO}_x$  for every 1,000 gallons of oil burned in boilers > 100 million Btu/hr.
- 55 lbs of  $\text{NO}_x$  for every 1,000 gallons of oil burned in boilers 0.5 to 100 million Btu/hr using residual fuels (#6, #5, #4).
- 20 lbs of  $\text{NO}_x$  for every 1,000 gallons of oil burned in boilers 0.5 to 100 million Btu/hr using distillate fuels (#2, #1).
- 18 lbs of  $\text{NO}_x$  for every 1,000 gallons of oil burned in boilers less than 0.5 million Btu/hr using distillate fuels (#2, #1).
- 550 lbs of  $\text{NO}_x$  for every 1,000,000 cubic feet of gas burned in boilers >100 million Btu/hr.
- 140 lbs of  $\text{NO}_x$  for every 1,000,000 cubic feet of gas burned in boilers 10 to 100 million Btu/hr.
- 100 lbs of  $\text{NO}_x$  for every 1,000,000 cubic feet of gas burned in boilers less than 10 million Btu/hr.

### Diesel Engines, Turbines and Other Combustion Equipment;

$\text{SO}_2$  : Calculated as indicated for boilers.

$\text{NO}_x$  : Calculated from equipment manufacturers specifications (or as contained in a written MassDEP approval).

**Total Emissions** are the emission factors multiplied by the short term and twelve month rolling calendar period restrictions, accounting for any necessary conversions. For example, a boiler that emits 20 lbs of  $\text{NO}_x$  per 1,000 gallons of fuel and has a fuel restriction of 2,000 gallons per month would have potential emissions of 40 lbs per month of  $\text{NO}_x$ . A facility that emits 7.5 lbs of VOC per gallon of coating and has a restriction of 100 gallons of that coating per month would have potential emissions of 750 lbs per month of VOC.



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## BWP AQ 09 Potential Emission Restriction Permit Application Completeness Checklist

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- ☐ The MassDEP Transmittal Form is completed:  
<http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html>
- ☐ All questions have been answered (N/A has been inserted where appropriate).
- ☐ A signature of the legally responsible official has been included even if an agent has been hired to complete the application. See definitions in 310 CMR 7.00.
- ☐ Two complete copies of the application are being transmitted for review to Air Quality Control at the appropriate MassDEP Regional Office.

To submit the application package:

- ☐ Checklist items have been completed.
- ☐ Send two copies of the application along with one copy of the MassDEP Transmittal Form to:  
  
Department of Environmental Protection  
\_\_\_\_\_ \* Regional Office  
Air Quality Control  
\*Find your region: <http://www.mass.gov/eea/agencies/massdep/about/contacts/>
- ☐ Send fee of \$1,900 in the form of check or money order made payable to *Commonwealth of Massachusetts*, along with one copy of the MassDEP Transmittal Form to:  
  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211